

# PATENT SPECIFICATION

(11) 1 237 196

NO DRAWINGS

- (21) Application N . 57143/67 (22) Filed 15 Dec. 1967  
 (23) Complete Specification filed 27 Nov. 1968  
 (45) Complete Specification published 30 June 1971  
 (51) International Classification A 41 b 3/00  
 (52) Index at acceptance A3V 1B4D1 1B4D2 6B1 6B2 6D2 6G2B 7B4  
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## (54) FOLDED LININGS OR INTERLININGS

- (71) We, BONDINA LIMITED, a British Company, of Greetland, Halifax, Yorkshire, formerly BONDINA (B.D.A.) LIMITED, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—
- This invention relates to linings or interlinings of garments or parts of garments which are folded in use and which are composed either of two layers of fabric with an interlining between them, or of one layer of fabric with a lining attached to it. It is desirable that the line about which the fold is to be made should be clearly defined, as is explained in our Specification No. 1,063,800. We there point out that in the manufacture of a collar the layers of fabric forming the collar are of course assembled and secured together, and then must be folded about a fold line to produce a fold collar, and this line is normally curved. When this is to be worn, or if it is attached to the remainder of the garment when it is so attached and folded, it must assume a rounded shape so as to fit round the neck of the wearer.
- In the method of forming a fold line described and claimed in Specification No. 1,063,800, the lining or interlining is composed of at least two layers joined together, the first being of meltable material and another of non-meltable material, or of meltable material of higher melting point than that of the first layer. The meltable material of the first layer is melted and thus severed along the fold line by a heated tool.
- Our object in this invention is to provide an improved method of making a lining or interlining with a fold line.
- In the invention the lining or interlining is formed from two fabrics bonded together, and the essential feature of the invention comprises interposing a layer of thermoplastic adhesive polymeric material between the two fabrics with one or more gaps in it to define the fold line and bonding the two fabrics together by the adhesive layer.
- Although the adhesive layer may be formed by printing a powdered adhesive onto one of the fabrics in such a way as to leave the gap or gaps, the layer is preferably formed by a sheet of thermoplastic adhesive polymeric material, the gap or gaps being made by forming a slit or slits in the sheet.
- In such a sheet, one slit may extend for the entire length of the desired fold line or several shorter slits may be formed along the length of the fold line; this latter is preferred since the sheets of material are easier to handle if the slits are not too long. Any thermoplastic polymeric material which has a suitable low melting point may be used, and we have found that 250 gauge-polyethylene film is very suitable for collar interlinings. In this case, the slit or slits are preferably about  $\frac{3}{32}$ nds. inch wide.
- The fold line may be curved as in the case of a collar, or may be straight as in the case of a shirt cuff. The actual curvature of the fold line in a collar may be altered as desired for the manufacture of different sizes of collar, or for the manufacture of different styles of garment.
- Each of the fabrics may be woven or non-woven. Woven materials include the specially bleached and tinted woven collar interlining sold under the trade mark Mellosan 375, and suitable non-wovens include materials based on nylon and viscose fibres bonded with acrylic latices such as those sold under the trade marks Vilene A65T, Vilene ES5T, Vilene 666T and Vilene F3.
- A collar interlining may be produced as follows: a rectangular strip of 250 gauge polyethylene film, approximately 18 inches long and 4 inches wide, has a curved slit  $\frac{3}{32}$  inch wide cut out of the middle along the greater part of its length. This strip is sandwiched between a woven fabric and a non-woven fabric, and the whole laminated together under heat and pressure. The rectangular laminate is then trimmed to the shape of a collar interlining, and folds easily and sharply along the fold line defined by the slit in the original polyethylene strip.
- The simple hand process just described is readily adaptable to large-scale production. Slits are formed in continuous sheets of

thermoplastic material, by means of a rotary die cutting machine, and the sheet is then positioned between two layers of interlining fabric. The composite may then be bonded by passing it, for example, around a Palmer dryer cylinder or by use of a heated press, and collar shapes are stamped out of the resultant laminate, for example by means of a clicking tool. Correct location of the clicking tool may be achieved, for example, by bringing into register colour markings on the thermoplastic sheet, or cuts in an opaque thermoplastic sheet, which are visible through the plies of the laminate and are so placed with respect to the slits that they will not be visible on a finished collar.

When a sheet of thermoplastic material is used as the adhesive layer, it may be prelaminate with either fabric first, and then the second fabric may be combined with the prelaminate.

WHAT WE CLAIM IS:—

1. A method of making a lining or interlining of two fabrics with a fold line

which comprises interposing a layer of a thermoplastic adhesive polymeric material between the two fabrics with one or more gaps in it to define the fold line and bonding the two fabrics together by the adhesive layer.

2. A method of making a lining or interlining of two fabrics with a fold line which comprises forming a slit or slits in a sheet of thermoplastic adhesive polymeric material to define the fold line and bonding the two fabrics together by the slit sheet.

3. A method according to claim 1 in which the fold line is defined by several short slits in the sheet of thermoplastic material.

4. A lining or interlining made by a method according to any preceding claim.

5. A foldable collar having a lining or interlining according to claim 4.

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